

2014-2015 Weekly Field Reports

Copacabana, King George Island

Report 2
January 25, 2015

Camp Operations:

1. We discovered a large ice damn on the western side of the main hut. The damn (yes, we prefer this spelling) is preventing the hut's floor from drying out. We have been working to melt and chip the damn all week, and it is getting smaller. Bets are on whether it will be gone before our departure.



2. We have started preparations to close the camp. The rain gutters have been taken down and stowed; our water supply has been distributed among available storage barrels; the generators have been winterized; gasoline has been stabilized and stored in a fish box to contain possible spills; and the canoe has been portaged from the Ecology Glacier back to camp. With big thanks to our colleagues and friends at Arctowski Station, 2+ years of garbage and about 80 gallons of old gasoline were also removed from the camp.

3. We continue to eat well. Breakfast highlights from the menu of the week include “curried” French toast as well as biscuits and bacon gravy. Dinner highlights include pork and sauerkraut, chicken “pot pie”, lasagna, pizza with anchovies, and a selection

of steak meals (photo above shows U.S. AMLR Director George Watters making pizza!).

Science:

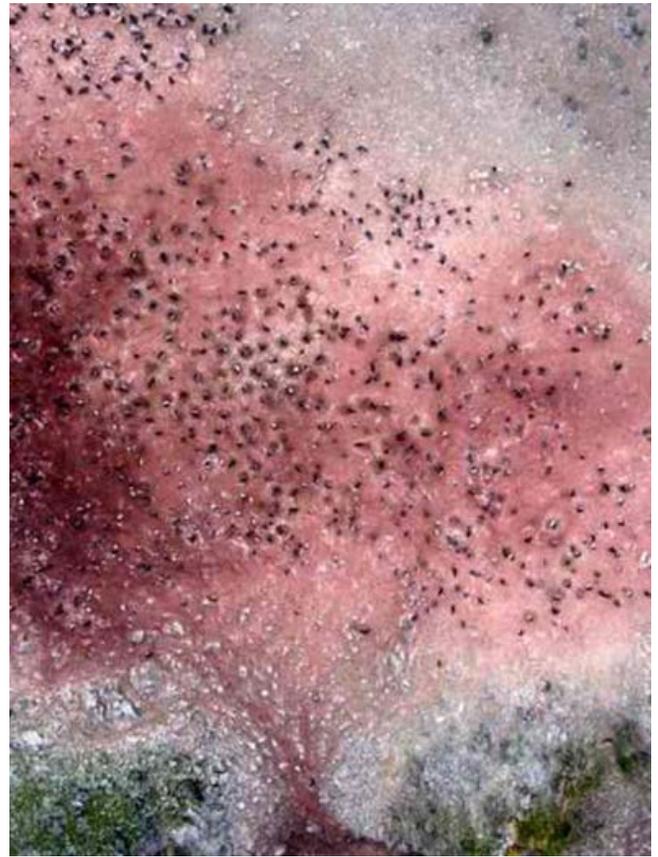


be 45.4mm (range 26 to 59mm) and roughly 66% of measured krill were identified as male.

4. This week we collected diet samples from Adélie and gentoo penguins. Krill were present in 100% of diet samples and represented 98% of diet mass while unidentified fish remains represented the remainder. Mean krill size is estimated to



5. We concluded all census work for gentoo penguin chicks this week. Total chick production at the Copacabana colony was 6438 (range from 6282 to 6592), equivalent to the estimated total production last year (6585).
6. To accompany all census work conducted this year, we flew aerial surveys over all penguin colonies in the Copacabana colony this week. Taking advantage of short weather breaks on two days and one calm day, we successfully conducted 9 flights, totaling 110 minutes of survey effort, with our hexacopter at 33m above-ground altitude. We collected about 1750 Images from the hexacopter; shown right is one image from the survey.
7. Skua territories were searched this week to identify breeding activity in both brown and south polar skuas. We located 92 known territories near Copacabana and Arctowski stations. Most (N=51) were unoccupied. Twenty-three territories were occupied by brown skuas and 13 offspring, from eggs to chicks ca. five weeks old, were observed. Eighteen territories were occupied by south polar skuas and we identified 2 nests near Arctowski station that contained one egg each. These two observations of eggs mark the first known breeding attempts of south polar skuas in our study area since 2011-12.
8. On January 22nd, the first Adélie fledgling was observed on the beach preparing to leave for the winter. We began sampling Adélie penguin fledglings on January 22nd and weighing of chicks continues. Current estimates of fledge mass are 3158 +/- 281 g (N=92).



9. Radio transmitters continue to record foraging trip durations of gentoo penguins on Copa Beach. We have retrieved three of four satellite tags on gentoo penguins used to track foraging locations at sea. One tag remains at liberty and we continue retrieval efforts (hopefully will recover before we close camp).

10. We have installed four new time lapse cameras in our penguin colonies and successfully redeployed seven others. The primary objective of each camera is to record breeding chronology and reproductive success of our study penguin species. Five of the cameras are dedicated to the study of Adélie penguins, and another five are dedicated to gentoo penguins. The last camera is positioned to study both species in a mixed colony. A cursory look at images obtained from the cameras during the 2014-15 breeding season (sample shown above) included clear photos of hatching events, nest failures, and total chick production from focal study nests. (Note the lower perimeter of the nest in the lower corner of the photo contains freshly ejected egg shells, a feature common to all observations of egg hatching in the photos we've seen.)



Marine Mammals:

11. Humpback whales are numerous in the bay this year. We observed groups of 2-3 whales, often with a calf, nearly every day. Behaviors included traveling, breaching, diving, and surface play. One individual was observed repeatedly and forcefully swinging its fluke across the surface of the water. On a particularly calm morning, their blows could be heard from distances estimated to be two miles.
12. We observed the first Antarctic fur seal at Copacabana Beach on January 24th. Two more have hauled out today. Our overwinter time lapse photography study also confirmed the presence of an Antarctic fur seal in our study colonies on 19 June 2014.

Weather:

13. Strong winds and precipitation dominated our weather this week. Temperatures have been above freezing and most snow and ice around camp has melted (but see note about the ice damn).

Submitted by AMLR researchers currently residing at Copacabana.

